AMENDMENTS TO THE CLAIMS

Listing of Claims

Claim 1 (currently amended): A method of treating ore particles to facilitate subsequent processing of the ore particles to recover valuable components from the ore, including the steps of: exposing the ore particles to microwave energy and causing structural alteration of the ore particles without significantly altering the mineralogy, ie composition, of the ore, the structural alteration of the ore particles being a result of differences in thermal expansion of minerals within ore particles, as a consequence of exposure to microwave energy, resulting in regions of high stress/strain within the ore particles and leading to micro-cracking or other physical changes within the ore particles.

Claim 2 (currently amended): The method defined in claim 1 ~~includes~~ further including exposing the ore particles to microwave energy and causing structural alteration of the ore particles without catastrophic destruction of the ore particles.

Claim 3 (currently amended): The method defined in claim 1 ~~or claim 2 includes~~further including screening the ore particles prior to exposing the ore particles to microwave energy in order to provide a preferred particle size distribution for subsequent microwave energy treatment.

Claim 4 (currently amended): The method defined in ~~any one of the preceding claims includes~~claim 1 further including screening the ore particles prior to exposing the ore particles to microwave energy in order to remove fines from the ore particles.

Claim 5 (currently amended): The method defined in ~~any one of the preceding claims includes~~claim 1 further including exposing the ore particles to pulses of microwave energy.

Claim 6 (original): The method defined in claim 5 wherein the microwave energy within the pulses has high energy to give rapid heating of susceptor minerals in the ore.

Claim 7 (currently amended): The method defined in claim 5 ~~or claim 6~~ wherein the pulses of microwave energy includes pulses of short duration.

Claim 8 (original): The method defined in claim 7 wherein the time period of each pulse is less than 1 second.

Claim 9 (original): The method defined in claim 8 wherein the pulse time period is less than 0.1 second.

Claim 10 (original): The method defined in claim 9 wherein the pulse time period is less than 0.001 second.

Claim 11 (currently amended): The method defined in ~~any one of the preceding claims~~claim 1 wherein the ore particles include microwave susceptor and non-susceptor components and the valuable components in the ore are metals and the metals are part of the microwave susceptor components of the ores.

Claim 12 (currently amended): The method defined in ~~any one of the preceding claims~~claim 1 wherein the ore is an ore in which the valuable components are metals and the metals are present as a sulphide.

Claim 13 (original): The method defined in claim 12 wherein the ore is a copper-containing ore in which the copper is present as a sulphide, such as chalcopyrite or chalcocite.

Claim 14 (original): The method defined in claim 12 wherein the ore is a nickel-containing ore in which the nickel is present as a sulphide.

Claim 15 (original): The method defined in claim 12 wherein the ore is a uranium-containing ore.

Claim 16 (currently amended): The method defined in ~~any one of claims 1 to 11~~claim 1 wherein the ore is an ore in which the valuable components are iron and the ore contains iron minerals where some of the iron minerals have disproportionately higher levels of unwanted impurities.

Claim 17 (currently amended): The method defined in ~~any one of claims 1 to 11~~claim 1 wherein the ore is a diamond ore and the ore has a mix of diamond containing minerals and diamond barren minerals such as quartz.

Claim 18 (currently amended): The method defined in ~~any one of the preceding claims~~claim 1 wherein the ore particles have a major dimension of 15 cm or less prior to exposure to microwave energy.

Claim 19 (currently amended): The method defined in ~~any one of the preceding claims includes~~claim 1 further including transporting the ore to an inlet end of the transfer chute on a conveyor and transporting the microwave-treated ore from an outlet end of the transfer chute on a conveyor.

Claim 20 (currently amended): A method of treating ore particles to facilitate subsequent processing of the ore particles to recover valuable components from the ore, including the steps of: exposing the ore particles to microwave energy and causing structural alteration of the particles without catastrophic break down of the particles, the structural alteration of the ore particles being a result of differences in thermal expansion of minerals within

ore particles, as a consequence of exposure to microwave energy, resulting in regions of high stress/strain within the ore particles and leading to micro-cracking or other physical changes within the ore particles.

Claim 21 (currently amended): A method of treating ore particles to facilitate subsequent processing of the ore particles to recover valuable components from the ore, including the steps of: exposing the ore particles to pulses of microwave energy and causing structural alteration of the particles, the structural alteration of the ore particles being a result of differences in thermal expansion of minerals within ore particles, as a consequence of exposure to microwave energy, resulting in regions of high stress/strain within the ore particles and leading to micro-cracking or other physical changes within the ore particles.

Claim 22 (original): The method defined in claim 21 wherein the microwave energy within the pulses has high energy to give rapid heating of susceptor minerals in the ore.

Claim 23 (currently amended): The method defined in claim 21 ~~or claim 22~~ wherein the pulsed microwave energy includes pulses of short duration and high energy.

Claim 24 (original): The method defined in claim 23 wherein the time period of each pulse is less than 1 second.

Claim 25 (original): The method defined in claim 24 wherein the pulse time period is less than 0.1 second.

Claim 26 (original): The method defined in claim 25 wherein the pulse time period is less than 0.001 second.

Claim 27 (original): A method of recovering valuable metals from an ore including the steps of:

(a) treating ore particles by the exposing ore particles to microwave energy and causing structural alteration of the particles, the structural alteration of the ore particles being a result of differences in thermal expansion of minerals within ore particles, as a consequence of exposure to microwave energy, resulting in regions of high stress/strain within the ore particles and leading to micro-cracking or other physical changes within the ore particles; and

(b) processing the treated ore particles to recover valuable metals.